



## VPDES PERMITS

### Threatened and Endangered Species Coordination

**To:**

- ☒ DGIF, Environmental Review Coordinator
- ☒ DCR
- ☐ USFWS, T/E Review Coordinator

**From:**

Leah Revelle  
DEQ, Blue Ridge Regional Office  
7705 Timberlake Road  
Lynchburg, VA 24502  
434.582.6219  
[leah.revelle@deq.virginia.gov](mailto:leah.revelle@deq.virginia.gov)

**Date Sent:** 3/2/2011

**Permit Number:**

VA0026247

**Facility Name:**

Town of Boydton WWTP

**Contact:**

Ray Smith, Chief Operator

Email:

[bwtp@boydton.org](mailto:bwtp@boydton.org)

**Phone:**

434.738.6021

**Address:****Facility Mailing Address:**

P.O. Box 62  
Boydton, VA 23917

**Location:**

950 Carter Lane Road  
Boydton, VA 23917

**USGS Quadrangle:**

Pole Branch, 011A

**Latitude/Longitude:**

36° 40' 9.7"  
78° 22' 24.5"

**NOTE:** There is one additional outfall; however, it is rainfall dependent. This outfall collects storm water from the plant grounds via 3 drop inlets. No process wastewater is discharged from this outfall.

**Receiving Stream:**

Coleman Creek

**Receiving Stream Flow Statistics used for  
Permit:**

7-Day/10-Year Low Flow: 0.0276 MGD

	<p>7-Day/10-Year High Flow: 0.343 MGD  1-Day/10-Year Low Flow: 0.025 MGD  1-Day/10-Year High Flow: 0.293 MGD  30-Day/5-Year Low Flow: 0.0761 MGD  30-Day/10-Year Low Flow: 0.049 MGD  Harmonic Mean Flow: 0.0 MGD</p> <p>Also see attached memo entitled "Planning Statement for VPDES Permit Application Processing DEQ-SCRO" for additional information.</p>
<p><b>Effluent Characteristics and Max Daily Flow:</b></p> <p><b><u>Plant Design Flow (Outfall 001):</u></b></p> <p>360,000 gpd (0.360 MGD)</p> <p><b>Effluent Characteristics:</b> As the permit has not been drafted at the time this coordination form is being submitted, the effluent limitations page from the <b><u>existing permit</u></b> is included as an attachment to this form. Draft permit effluent limitations are not yet available.</p> <p><b>Project Description:</b> The Boydton WWTP is an activated sludge treatment system consisting of mechanically and manually cleaned bar screens, a mechanically cleaned aerated grit chamber, an off-line flow equalization basin, two-stage activated sludge aeration (oxidation ditches followed by conventional activated sludge aeration basins), rim feed clarifiers, effluent filtering, disinfection(chlorination), dechlorination, post-aeration, effluent flow measurement, and final discharge through Outfall 001. The permittee requested a permit modification to incorporate results of a Water Effects Ratio (WER) Study for Copper, removal of Tributyltin (TBT) monitoring, removal of Total Recoverable Silver monitoring, and reductions in the monitoring frequencies of the following parameters: Total Suspended Solids, Total Kjeldahl Nitrogen (TKN) and cBOD<sub>5</sub>.</p>	<p><b>Species Search Results (or attach database report and map):</b></p> <p>See attached VaFWIS IPA report</p> <p><b>NOTE:</b> For the sake of brevity, only pages explicitly denoting a "Yes" in the "Confirmed" column are included.</p>

Attach draft permit effluent limits page if available or attach existing effluent limits page (make sure it is clear in your email which one it is – draft current or existing).

DGIF email: [projectreview@dgif.virginia.gov](mailto:projectreview@dgif.virginia.gov)

USFWS email: [cindy\\_kane@fws.gov](mailto:cindy_kane@fws.gov)

DCR: If Natural Heritage Data Explorer (NHDE) has the needed information DCR does not need this form. If you have additional information you wish to add, you may do so in the comments field on the NHDE form. DCR will contact you directly if they need more information.



### Define Point of Interest

36,40,09.7 -78,22,24.4  
is the Search Point

### Search Point

☒ Change to "clicked" map point  
☐ Fixed at 36,40,09.7 -78,22,24.4

### Show Position Rings

☒ Yes ☐ No  
 1 mile and 1/4 mile at the Search Point

### Show Search Area

☒ Yes ☐ No  
 2 Search distance miles radius

Search Point is at map center

### Base Map Choices

Topography

### Map Overlay Choices

Current List: Position, Search

### Map Overlay Legend

Position Rings 1 mile and 1/4 mile at the Search Point

2 mile radius Search Area

## Virginia Fish and Wildlife Information Service

back
Map Click **Pan** Map Scale **In** **Zoom** **Out** Screen Size **Small** **Size** **Big** [Help](#)

Commonwealth of Virginia Department of Game and Inland Fisheries - March 2, 2011

Point of Search 36,40,09.7 -78,22,24.4  
 Map Location 36,40,09.7 -78,22,24.4

Select Coordinate System: ☒ Degrees, Minutes, Seconds Latitude - Longitude  
☐ Decimal Degrees Latitude - Longitude  
☐ Meters UTM NAD83 East North Zone  
☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terra-server-usa.com](http://Microsoft.terra-server-usa.com) for details)

Map projection is UTM Zone 17 NAD 1983 with left 728353 and top 4067826. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 800 columns by 800 rows for a total of 640000 pixels. The map display represents 12800 meters east to west by 12800 meters north to south for a total of 163.8 square kilometers. The map display represents 42001 feet east to west by 42001 feet north to south for a total of 63.2 square miles.

Topographic maps and Black and white aerial photography for year 1990+ are from the United States Department of the Interior, United States Geological Survey. Color aerial photography acquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.

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**VaFWIS Search Report** Compiled on 3/2/2011, 10:56:02 AM 327595.0

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Known or likely to occur within a **2 mile radius of 36,40,09.7 -78,22,24.3**  
in **117 Mecklenburg County, VA**

415 Known or Likely Species ordered by Status Concern for Conservation

<u>BOVA Code</u>	<u>Status*</u>	<u>Tier**</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Confirmed</u>	<u>Database(s)</u>
010214	FESE	I	<u>Logperch, Roanoke</u>	Percina rex		BOVA
040267	SE	I	<u>Wren, Bewick's</u>	Thryomanes bewickii		CBC
040129	ST	I	<u>Sandpiper, upland</u>	Bartramia longicauda		BOVA
040293	ST	I	<u>Shrike, loggerhead</u>	Lanius ludovicianus		CBC,BOVA
						BOVA,HU6



040385	ST	I	<u>Sparrow, Bachman's</u>	<i>Aimophila aestivalis</i>		
040379	ST	I	<u>Sparrow, Henslow's</u>	<i>Ammodramus henslowii</i>		BOVA
010353	ST	II	<u>Darter, Carolina</u>	<i>Etheostoma collis</i>	Yes	TEWaters,Habitat,BOVA,HU6
040093	FSST	II	<u>Eagle, bald</u>	<i>Haliaeetus leucocephalus</i>		CBC,BOVA,HU6
060173	FSST	II	<u>Pigtoe, Atlantic</u>	<i>Fusconaia masoni</i>		BOVA
010070	ST	IV	<u>Shiner, whitemouth</u>	<i>Notropis alborus</i>	Yes	TEWaters,Habitat,BOVA,HU6
040292	ST		<u>Shrike, migrant loggerhead</u>	<i>Lanius ludovicianus migrans</i>		BOVA
030063	CC	III	<u>Turtle, spotted</u>	<i>Clemmys guttata</i>		BOVA,HU6
040372		I	<u>Crossbill, red</u>	<i>Loxia curvirostra</i>		CBC
040225		I	<u>Sapsucker, yellow-bellied</u>	<i>Sphyrapicus varius</i>		CBC,BOVA
040319		I	<u>Warbler, black-throated green</u>	<i>Dendroica virens</i>		BOVA
010174		II	<u>Bass, Roanoke</u>	<i>Ambloplites cavifrons</i>		BOVA
040052		II	<u>Duck, American black</u>	<i>Anas rubripes</i>		CBC,BOVA,HU6
040105		II	<u>Rail, king</u>	<i>Rallus elegans</i>		BOVA
040320		II	<u>Warbler, cerulean</u>	<i>Dendroica cerulea</i>		BOVA,HU6
040266		II	<u>Wren, winter</u>	<i>Troglodytes troglodytes</i>		CBC,BOVA
030068		III	<u>Turtle, eastern box</u>	<i>Terrapene carolina carolina</i>		BOVA,HU6
040037		III	<u>Bittern, least</u>	<i>Ixobrychus exilis exilis</i>		BOVA,HU6
040094		III	<u>Harrier, northern</u>	<i>Circus cyaneus</i>		CBC,BOVA
040034		III	<u>Heron, tricolored</u>	<i>Egretta tricolor</i>		BOVA
040035		III	<u>Night-heron, black-crowned</u>	<i>Nycticorax nycticorax hoactii</i>		CBC
040036		III	<u>Night-heron, yellow-crowned</u>	<i>Nyctanassa violacea violacea</i>		BOVA
040204		III	<u>Owl, barn</u>	<i>Tyto alba pratincola</i>		CBC,BOVA,HU6
040062		III	<u>Redhead</u>	<i>Aythya americana</i>		CBC,BOVA,HU6
040181		III	<u>Tern, common</u>	<i>Sterna hirundo</i>		CBC,BOVA,HU6
040270		III	<u>Wren, sedge</u>	<i>Cistothorus platensis</i>		CBC,BOVA,HU6
060145		III	<u>Rainbow, notched</u>	<i>Villosa constricta</i>		BOVA,HU6
010038		IV	<u>Alewife</u>	<i>Alosa pseudoharengus</i>		BOVA
010405		IV	<u>Drum, freshwater</u>	<i>Aplodinotus grunniens</i>		HU6
010131		IV	<u>Eel, American</u>	<i>Anguilla rostrata</i>		BOVA
010040		IV	<u>Shad, American</u>	<i>Alosa sapidissima</i>		BOVA
010375		IV	<u>Shiner, ironcolor</u>	<i>Notropis chalybaeus</i>		HU6
020069		IV	<u>Salamander, eastern mud</u>	<i>Pseudotriton montanus montanus</i>		BOVA,HU6
030009		IV	<u>Lizard, eastern slender glass</u>	<i>Ophisaurus attenuatus longicaudus</i>		BOVA,HU6
030045		IV	<u>Ribbonsnake, common</u>	<i>Thamnophis sauritus sauritus</i>		BOVA
030017		IV	<u>Scarletsnake, northern</u>	<i>Cemophora coccinea copei</i>		BOVA
030058		IV	<u>Slider, yellow-bellied</u>	<i>Trachemys scripta scripta</i>		BOVA,HU6
030024		IV	<u>Snake, eastern hog-nosed</u>	<i>Heterodon platirhinos</i>		BOVA,HU6
030033		IV	<u>Snake, queen</u>	<i>Regina septemvittata</i>		BOVA,HU6

040215	IV	<u>Whip-poor-will</u>	Caprimulgus vociferus		BOVA,HU6
040140	IV	<u>Woodcock, American</u>	Scolopax minor		CBC,BOVA,HU6
040269	IV	<u>Wren, marsh</u>	Cistothorus palustris		CBC,BOVA,HU6
060137	IV	<u>Creeper</u>	Strophitus undulatus		HU6
060074	IV	<u>Mucket, tidewater</u>	Leptodea ochracea		HU6
010188		<u>Bass, largemouth</u>	Micropterus salmoides		BOVA
010168		<u>Bass, striped</u>	Morone saxatilis		BOVA
010183		<u>Bluegill</u>	Lepomis macrochirus		BOVA
010123		<u>Bullhead, brown</u>	Ameiurus nebulosus		BOVA
010124		<u>Bullhead, flat</u>	Ameiurus platycephalus		BOVA
010122		<u>Bullhead, yellow</u>	Ameiurus natalis		BOVA
010062		<u>Carp, common</u>	Cyprinus carpio		BOVA
010125		<u>Catfish, channel</u>	Ictalurus punctatus		BOVA
010130		<u>Catfish, flathead</u>	Pylodictis olivaris		BOVA
010120		<u>Catfish, white</u>	Ameiurus catus		BOVA
010066		<u>Chub, bluehead</u>	Nocomis leptcephalus		BOVA
010103		<u>Chub, creek</u>	Semotilus atromaculatus	Yes	Collections,BOVA
010106		<u>Chubsucker, creek</u>	Erismyzon oblongus		BOVA
010190		<u>Crappie, black</u>	Pomoxis nigromaculatus		BOVA
010189		<u>Crappie, white</u>	Pomoxis annularis		BOVA
010060		<u>Dace, mountain redbelly</u>	Chrosomus oreas	Yes	Collections,BOVA
010366		<u>Dace, rosyside</u>	Clinostomus funduloides	Yes	Collections
010193		<u>Darter, fantail</u>	Etheostoma flabellare	Yes	Collections,BOVA
010204		<u>Darter, glassy</u>	Etheostoma vitreum		BOVA
010198		<u>Darter, johnny</u>	Etheostoma nigrum	Yes	Collections,BOVA
010213		<u>Darter, shield</u>	Percina peltata		BOVA
010033		<u>Gar, longnose</u>	Lepisosteus osseus		BOVA
010045		<u>Herring, blueback</u>	Alosa aestivalis		BOVA
010112		<u>Jumprock, black</u>	Moxostoma cervinum		BOVA
010129		<u>Madtom, margined</u>	Noturus insignis		BOVA
010148		<u>Mosquitofish, eastern</u>	Gambusia holbrooki		BOVA
010054		<u>Mudminnow, eastern</u>	Umbra pygmaea		BOVA
010163		<u>Perch, pirate</u>	Aphredoderus sayanus		BOVA
010166		<u>Perch, white</u>	Morone americana		BOVA
010206		<u>Perch, yellow</u>	Perca flavescens		BOVA
010056		<u>Pickrel, chain</u>	Esox niger		BOVA
010055		<u>Pickrel, redfin</u>	Esox americanus americanus		BOVA
010182		<u>Pumpkinseed</u>	Lepomis gibbosus		BOVA
010374		<u>Quillback</u>	Carpoides cyprinus		BOVA
010114		<u>Redhorse, golden</u>	Moxostoma erythrurum		BOVA
010387		<u>Redhorse, silver</u>	Moxostoma anisurum		BOVA
010113		<u>Redhorse, v-lip</u>	Moxostoma pappillosum		BOVA
010041		<u>Shad, gizzard</u>	Dorosoma cepedianum		BOVA
010042		<u>Shad, threadfin</u>	Dorosoma petenense		BOVA



010072		<u>Shiner, comely</u>	Notropis amoenus		BOVA
010078		<u>Shiner, crescent</u>	Luxilus cerasinus	Yes	Collections,BOVA
010068		<u>Shiner, golden</u>	Notemigonus crysoleucas		BOVA
010071		<u>Shiner, highfin</u>	Notropis altipinnis		BOVA
010094		<u>Shiner, mimic</u>	Notropis volucellus		BOVA
010074		<u>Shiner, rosefin</u>	Lythrurus ardens		BOVA
010073		<u>Shiner, satinfin</u>	Cyprinella analostana		BOVA
010082		<u>Shiner, spottail</u>	Notropis hudsonius		BOVA
010086		<u>Shiner, swallowtail</u>	Notropis procne		BOVA
010069		<u>Shiner, white</u>	Luxilus albeolus		BOVA
010058		<u>Stoneroller, central</u>	Campostoma anomalum		BOVA
010108		<u>Sucker, northern hog</u>	Hypentelium nigricans		BOVA
010105		<u>Sucker, white</u>	Catostomus commersoni		BOVA
010178		<u>Sunfish, bluespotted</u>	Enneacanthus gloriosus		BOVA
010181		<u>Sunfish, green</u>	Lepomis cyanellus		BOVA
010180		<u>Sunfish, redbreast</u>	Lepomis auritus	Yes	Collections,BOVA
010185		<u>Sunfish, redear</u>	Lepomis microlophus		BOVA
010216		<u>Walleye</u>	Sander vitreus vitreus		BOVA
010177		<u>Warmouth</u>	Lepomis gulosus		BOVA
020004		<u>Bullfrog, American</u>	Lithobates catesbeianus	Yes	Collections,BOVA
020015		<u>Frog, coastal plain cricket</u>	Acris gryllus gryllus		BOVA
020012		<u>Frog, eastern cricket</u>	Acris crepitans crepitans		BOVA
020008		<u>Frog, northern green</u>	Lithobates clamitans melanota		BOVA
020013		<u>Frog, pickerel</u>	Lithobates palustris		BOVA
020016		<u>Frog, southern leopard</u>	Lithobates sphenoccephalus utricularius		BOVA
020018		<u>Frog, upland chorus</u>	Pseudacris feriarum feriarum		BOVA
020065		<u>Newt, red-spotted</u>	Notophthalmus viridescens viridescens		BOVA
020071		<u>Peeper, northern spring</u>	Pseudacris crucifer crucifer		BOVA
020084		<u>Salamander, Atlantic Coast Slimy</u>	Plethodon chlorobryonis		BOVA
020029		<u>Salamander, four-toed</u>	Hemidactylum scutatum		BOVA
020035		<u>Salamander, marbled</u>	Ambystoma opacum		BOVA
020038		<u>Salamander, northern dusky</u>	Desmognathus fuscus		BOVA
020070		<u>Salamander, northern red</u>	Pseudotriton ruber ruber		BOVA
020048		<u>Salamander, southern dusky</u>	Desmognathus auriculatus		BOVA
020050		<u>Salamander, southern two-lined</u>	Eurycea cirrigera		BOVA
020049		<u>Salamander, spotted</u>	Ambystoma maculatum		BOVA
020051		<u>Salamander, three-lined</u>	Eurycea guttolineata		BOVA
		<u>Salamander, white-</u>			



020080		<u>spotted slimy</u>	Plethodon cylindraceus		BOVA
020059		<u>Toad, eastern American</u>	Anaxyrus americanus americanus		BOVA
020060		<u>Toad, eastern narrow-mouthed</u>	Gastrophryne carolinensis		BOVA
020062		<u>Toad, Fowler's</u>	Anaxyrus fowleri		BOVA
020006		<u>Treefrog, Cope's gray</u>	Hyla chrysoscelis		BOVA
020007		<u>Treefrog, gray</u>	Hyla versicolor		BOVA
030041		<u>Brownsnake, northern</u>	Storeria dekayi dekayi		BOVA
030059		<u>Cooter, eastern river</u>	Pseudemys concinna concinna		BOVA
030016		<u>Copperhead, northern</u>	Agkistrodon contortrix mokasen		BOVA
030022		<u>Cornsnake, red</u>	Pantherophis guttatus		BOVA
030049		<u>Earthsnake, eastern smooth</u>	Virginia valeriae valeriae		BOVA
030044		<u>Gartersnake, eastern</u>	Thamnophis sirtalis sirtalis		BOVA
030038		<u>Greensnake, northern rough</u>	Opheodrys aestivus aestivus		BOVA
030026		<u>Kingsnake, eastern</u>	Lampropeltis getula getula		BOVA
030027		<u>Kingsnake, mole</u>	Lampropeltis calligaster rhombomaculata		BOVA
030002		<u>Lizard, eastern fence</u>	Sceloporus undulatus		BOVA
030029		<u>Milksnake, eastern</u>	Lampropeltis triangulum triangulum		BOVA
030018		<u>Racer, northern black</u>	Coluber constrictor constrictor		BOVA
030008		<u>Racerunner, eastern six-lined</u>	Aspidoscelis sexlineata sexlineata	Yes	Collections,BOVA
030023		<u>Ratsnake, eastern</u>	Pantherophis alleghaniensis		BOVA
030006		<u>Skink, broad-headed</u>	Plestiodon laticeps		BOVA
030004		<u>Skink, common five-lined</u>	Plestiodon fasciatus	Yes	Collections,BOVA
030007		<u>Skink, little brown</u>	Scincella lateralis		BOVA
030005		<u>Skink, southeastern five-lined</u>	Plestiodon inexpectatus		BOVA
030042		<u>Snake, northern red-bellied</u>	Storeria occipitomaculata occipitomaculata		BOVA
030020		<u>Snake, northern ring-necked</u>	Diadophis punctatus edwardsii		BOVA
030021		<u>Snake, southern ring-necked</u>	Diadophis punctatus punctatus		BOVA
030052		<u>Stinkpot</u>	Sternotherus odoratus		BOVA
030060		<u>Turtle, eastern painted</u>	Chrysemys picta picta		BOVA
030050		<u>Turtle, eastern snapping</u>	Chelydra serpentina serpentina		BOVA
030034		<u>Watersnake, northern</u>	Nerodia sipedon sipedon		BOVA
030019		<u>Wormsnake, eastern</u>	Carphophis amoenus amoenus		BOVA

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 001.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
	MONTHLY AVERAGE		WEEKLY AVERAGE		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
	mg/l*	kg/day*	mg/l*	kg/d*	mg/l*	mg/l*		
Flow (MGD) [a]	NL		NA		NA	NL	Continuous	TIRE
cBOD5 (December – April)	25	34	38	51	NA	NA	3 Days/Week	8-HC
cBOD5 (May - November)	13	17.7	20	27	NA	NA	3 Days/Week	8-HC
Total Suspended Solids	30	41	45	61	NA	NA	3 Days/Week	8-HC
Ammonia Nitrogen (December - April) [c]	10.5	NA	10.5	NA	NA	NA	1/Month	8-HC
Total Kjeldahl Nitrogen (May - November)	3.0	4.1	4.5	6.1	NA	NA	3 Days/Week	8-HC
Total Residual Chlorine (ug/l) [b] [c]	10.1		12.2		NA	NA	1/Day	Grab
Dissolved Oxygen	NA		NA		5.0	NA	1/Day	Grab
pH (standard units)	NA		NA		6.0	9.0	1/Day	Grab
Total Recoverable Copper (ug/l) [c]	21.9		21.9		NA	NA	1/Month	Grab
Total Recoverable Copper (ug/l) [c] [d]	12.7		12.7		NA	NA	1/Month	Grab
Total Recoverable Silver (ug/l) [c] [f]	3.0		3.0		NA	NA	1/3 Months	Grab
Total Recoverable Zinc (ug/l) [c] [f]	110		110		NA	NA	1/3 Months	Grab
Tributlytin (ug/l) [c] [e]	0.099		0.099		NA	NA	1/3 Months	Grab

\* = UNLESS OTHERWISE NOTED      NA = NOT APPLICABLE      NL = NO LIMIT, MONITORING REQUIREMENT ONLY  
TIRE = TOTALIZING, INDICATING AND RECORDING EQUIPMENT

1/3 Months = In accordance with the following schedule: 1st quarter (January 1 - March 31, **due April 10**); 2nd quarter (April 1 - June 30, **due July 10**); 3rd quarter (July 1 - September 30, **due October 10**); 4th quarter (October 1 - December 31, **due January 10**).

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 001 continued)

[a] See Part I.D.5. for additional flow requirements.

[b] See Part I.B for additional chlorine monitoring instructions.

[c] See Parts I.D.7.a. and I.D.7.b. for quantification levels and reporting requirements, respectively.

[d] See Part I.C. for Schedule of Compliance.

[e] See Part I.C. for Schedule of Compliance. No monitoring or reporting required until after completion of the schedule.

[f] See Part I.D.9. for additional instructions regarding effluent monitoring frequencies.

The design flow of this treatment facility is 0.360 MGD.

The 30-day average percent removal for BOD5 and TSS shall not be less than 85 percent for this effluent.

There shall be no discharge of floating solids or visible foam in other than trace amounts.



A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from outfall 002 (Storm water)

THIS OUTFALL SHALL CONTAIN STORM WATER RUNOFF ONLY RUNOFF WHERE NO MONITORING IS REQUIRED.  
THERE SHALL BE NO DISCHARGE OF PROCESS WASTEWATER FROM THIS OUTFALL.

- a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. SLUDGE LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning with issuance of this permit and lasting until the permit's expiration date, the permittee is authorized to manage sewage sludge according to the approved Sludge Management Plan. The pollutants in the sewage sludge shall be limited and monitored by the permittee as specified below:

a. Chemical Pollutant Limitations

SLUDGE CHARACTERISTICS	LIMITATIONS		MONITORING REQUIREMENTS	
	CEILING CONCENTRATION MAXIMUM	MONTHLY AVERAGE	FREQUENCY	SAMPLE TYPE
	mg/kg	mg/kg		
Percent Solids	NA	NL	1/Year	Composite
Total Arsenic	75	41	1/Year	Composite
Total Cadmium	85	39	1/Year	Composite
Total Copper	4300	1500	1/Year	Composite
Total Lead	840	300	1/Year	Composite
Total Mercury	57	17	1/Year	Composite
Total Molybdenum	75	NA	1/Year	Composite
Total Nickel	420	420	1/Year	Composite
Total Selenium	100	100	1/Year	Composite
Total Zinc	7500	2800	1/Year	Composite

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

1/Year = Between January 1 and December 31, **due January 10 of following year.**



A. SLUDGE LIMITATIONS AND MONITORING REQUIREMENTS (continued)

b. Annual Sludge Production Data

Report annual total amount of sludge produced, in dry metric tons, by your facility and annual amount of sludge, in dry metric tons, used or disposed in various methods (if applicable) according to the approved Sludge Management Plan.

c. Pathogen Reduction Limitations

- (1) Class B – Alternative 2, Aerobic digestion – Sewage sludge is to be agitated with air or oxygen to maintain aerobic conditions for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 40 days at 20 degrees Celsius and 60 days at 15 degrees Celsius.

d. Vector Attraction Reduction Limitations – The permittee shall demonstrate vector attraction reduction of sewage sludge by a method listed below:

- (1) Alternative 4 – The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

e. All samples shall be collected and analyzed in accordance with the approved Sludge Management Plan.

f. See Special Condition I.F. for additional sludge requirements.

A. GROUNDWATER LIMITATIONS AND MONITORING REQUIREMENTS

4. During the period beginning with issuance of this permit and lasting until the permit's expiration date, the permittee shall monitoring groundwater according to the approved Groundwater Monitoring Plan. The pollutants in the groundwater shall be limited and monitored by the permittee as specified below:

PARAMETER	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
Static Water Level	NL	0.01 FT	1/3 Months	Measured
pH (standard units)	NL	SU	1/3 Months	Grab
Chlorides	NL	mg/l	1/3 Months	Grab
Specific Conductance	NL	umhos/cm	1/3 Months	Grab
TOC	NL	mg/l	1/3 Months	Grab
Fecal Coliform	NL	mg/l	1/3 Months	Grab
Total Phosphorus	NL	mg/l	1/3 Months	Grab
Ammonia Nitrogen (NH <sub>3</sub> -N)	NL	mg/l	1/3 Months	Grab
Nitrate Nitrogen (NO <sub>3</sub> -N)	NL	mg/l	1/3 Months	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

1/3 Months = In accordance with the following schedule: 1st quarter (January 1 - March 31, **due April 10**); 2nd quarter (April 1 - June 30, **due July 10**); 3rd quarter (July 1 - September 30, **due October 10**); 4th quarter (October 1 - December 31, **due January 10**).

Grab samples - An individual sample should be taken after three (3) well volumes of ground water are removed (allowing the well to recharge between each well volume removed) or until well purging parameters (i.e. pH, temperature, and specific conductance) stabilize to  $\pm 10\%$ . The bailer or hose used should not contaminate samples.

## Mixing Zone Predictions for Town of Boynton STP

Effluent Flow = 0.360 MGD  
Stream 7Q10 = 0.0276 MGD  
Stream 30Q10 = 0.0485 MGD  
Stream 1Q10 = 0.025 MGD  
Stream slope = 0.0011 ft/ft  
Stream width = 6.0 ft  
Bottom scale = 2  
Channel scale = 1

---

### Mixing Zone Predictions @ 7Q10

Depth = .3504 ft  
Length = 105.25 ft  
Velocity = .2853 ft/sec  
Residence Time = .0043 days

#### Recommendation:

A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used.

---

### Mixing Zone Predictions @ 30Q10

Depth = .3623 ft  
Length = 102.1 ft  
Velocity = .2909 ft/sec  
Residence Time = .0041 days

#### Recommendation:

A complete mix assumption is appropriate for this situation and the entire 30Q10 may be used.

---

### Mixing Zone Predictions @ 1Q10

Depth = .349 ft  
Length = 105.58 ft  
Velocity = .2846 ft/sec  
Residence Time = .1031 hours

#### Recommendation:

A complete mix assumption is appropriate for this situation and the entire 1Q10 may be used.

---



## Mixing Zone Predictions for

## Boynton WWTP - High Flows

Effluent Flow = 0.360 MGD  
Stream 7Q10 = 0.343 MGD  
Stream 30Q10 = 0.49 MGD  
Stream 1Q10 = 0.293 MGD  
Stream slope = 0.0011 ft/ft  
Stream width = 6.0 ft  
Bottom scale = 2  
Channel scale = 1

---

### Mixing Zone Predictions @ 7Q10

Depth = .5105 ft  
Length = 74.54 ft  
Velocity = .3553 ft/sec  
Residence Time = .0024 days

#### Recommendation:

A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used.

---

### Mixing Zone Predictions @ 30Q10

Depth = .5763 ft  
Length = 66.54 ft  
Velocity = .3805 ft/sec  
Residence Time = .002 days

#### Recommendation:

A complete mix assumption is appropriate for this situation and the entire 30Q10 may be used.

---

### Mixing Zone Predictions @ 1Q10

Depth = .4869 ft  
Length = 77.89 ft  
Velocity = .3459 ft/sec  
Residence Time = .0625 hours

#### Recommendation:

A complete mix assumption is appropriate for this situation and the entire 1Q10 may be used.

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**Planning Statement for VPDES Permit Application Processing  
DEQ-SCRO**

<b>VPDES</b>	<b>OwnerName</b>	<b>Facility</b>	<b>County</b>
VA0026247	Town of Boynton	Municipal STP	Mecklenburg

**Outfall #:** 001

**River Basin:** Roanoke River

**Receiving Stream:** Coleman Creek

**Subbasin:** Roanoke River

**Watershed Code:** L78R

**River Mile:** 3.54

	MGD		MGD
1Q10	0.025	HF 1Q10	0.293
7Q10	0.0276	HF7Q10	0.343
30Q5	0.0761	HF30Q10	0.49
30Q10	0.0485	HM	0

**Modeling Notes**

Model Completed 1995 - Represent expanded flow limits

**WQMP Name** 9 VAC 25-720-80

**Statement** CBOD5, May-Nov 17.7 kg/day TKN, May-Nov 4.1 kg/day

**TMDL ID** None

**Impairment Cause** None

**TMDL Due Date**

**Completed TMDL Information**

None

**TMDL Approval Dates**

  
Amanda B. Gray, Water Planning Engineer or  
Paula Nash, TMDL Coordinator

2/2/11  
Date

**MEMORANDUM**  
**Department of Environmental Quality**  
**Blue Ridge Regional Office**

**7705 Timberlake Road**

**Lynchburg, Virginia 24502**

**Subject:** Planning and TMDL Service Requests for VPDES Permits

**To:** Amanda Gray, Water Planning Engineer to  
Paula Nash, TMDL Coordinator

**From:** Leah Revelle

**Date:** 1/31/2011

**Copies:** Planning File

The request for information is to be made at the following times:

**Planning:** Upon sending the reissuance reminder letter to the facility or, for an issuance or modification, at the time of application/modification request receipt.

**TMDL:** Same as above. For VPDES general permits, at the time of registration statement receipt.

**FACILITY NAME:** Town of Boydton STP

**VPDES PERMIT NO.** VA0026247 **EXPIRATION DATE:** 3/7/2012

**FACILITY PHYSICAL LOCATION:** 950 Carter Lane Road, Boydton 23917

**INDIVIDUAL PERMIT ACTION:** Issuance Reissuance **Modification**

**GENERAL PERMIT ACTION:** New Coverage Previously Covered – N/A

**PERMIT TYPE:** Major Minor General **Municipal** Industrial Storm Water TMP TRE

If a VPDES General Permit, which type: \_\_\_\_\_

**PERMIT WRITERS: ATTACH THE FOLLOWING**

- Topo map with facility location and outfall locations clearly marked (include any proposed outfalls)
- Site diagram for facilities with multiple outfalls
- Description or map showing effluent flow path if not apparent on topo map
- The outfall numbers, latitude, longitude, receiving stream and topo name in the table below (use an additional sheet if there are more outfalls)

Outfall No.	Latitude	Longitude	Receiving Stream	Topo Name
001	36° 40' 9.7"	78° 22' 24.5"	UT, Coleman Creek	Pole Branch, 011A
002	36° 40' 9.6"	78° 22' 27.1"	Coleman Creek	Pole Branch, 011A

**DATE INFORMATION NEEDED:** 2/7/2011

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Class III  
Section 1  
PWS

# MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY  
South Central Regional Office - Water Planning  
7705 Timberlake Road Lynchburg, VA 24502 434/582-5120

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**SUBJECT:** Flow Frequency Determination  
-Town of Boydton WWTP - VA#0026247

**TO:** Leah Revelle

**FROM:** Amanda Gray *abgray*

**DATE:** February 2, 2011

**COPIES:** File

This memo supersedes my August 7, 2006 to Kirk Batsel concerning the subject VPDES permit. The flow frequencies for the reference gage on Stony Creek near Dinwiddie, VA (#02046000) have not been recalculated since the last reissuance of the permit. Thus, the flow frequencies calculated for Coleman Creek during the last reissuance will remain current.

## **Coleman Creek at discharge point:**

Drainage Area: 4.66 mi<sup>2</sup>

1Q10 = 0.0388 cfs (0.025 MGD)	High Flow 1Q10 = 0.454 cfs (0.293 MGD)
7Q10 = 0.0427 cfs (0.0276 MGD)	High Flow 7Q10 = 0.5307 cfs (0.343 MGD)
30Q5 = 0.1178 cfs (0.0761 MGD)	High Flow 30Q10 = 0.7585 cfs (0.49 MGD)
30Q10 = 0.0751 cfs (0.0485 MGD)	Harmonic Mean = 0 cfs (0 MGD)

The high flow months are January through April. The harmonic mean could not be calculated due to the presence of zero flow events in the period of record for the reference gage. This analysis assumes there are no significant discharges, withdrawals or springs influencing the flow in Coleman Creek upstream of the discharge point.

If there are any questions concerning this analysis, please let me know.